ENERGY AND ENVIRONMENT CABINET

Department for Environmental Protection

Division of Water

(Amended After Comment)

401 KAR 5:005. Permits to construct, modify, or operate a facility.

RELATES TO: KRS 224.10-100, 224.16-050, 224.16-060, 224.70-100, 224.70-110, **40 C.F.R. 144, 26 U.S.C. 501(c)(3), 42 U.S.C. 300f – 300j,** EO 2008-507, 2008-531

STATUTORY AUTHORITY: KRS **[~~224.01-110,~~]** 224.10-100**(5), 224.10-110**, 224.16-050, 224.16-060, 224.70-100, 224.70-110

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100**(5)** requires the [~~Environmental and Public Protection~~] cabinet to develop and conduct a comprehensive program for the management of water resources and to provide for the prevention, abatement, and control of water pollution. EO 2008-507 and 2008-531, effective June 16, 2008, abolish the Environmental and Public Protection Cabinet and establish the new Energy and Environment Cabinet. This administrative regulation establishes administrative procedures for the issuance of permits for the construction, modification, and operation of facilities authorized by [~~under~~] KRS Chapter 224 and establishes conditions for construction of facilities under **401 KAR Chapter 5 [~~this chapter~~]**. The administrative regulation also establishes a schedule of fees to recover the costs of issuance for certain classes of permits. There is not a [~~no~~] federal law or regulation relating to construction requirements for wastewater treatment plants or the operational requirements for no discharge operations; [~~,~~] therefore, this administrative regulation is not more

stringent than the federal requirements. [~~The operational permit requirements are contained in the KPDES administrative regulations in 401 KAR 5:050 through 5:080 which are the same as the federal requirements~~].

Section 1. Applicability. (1) This administrative regulation shall apply to an owner [~~owners~~] and an operator [~~operators~~] of a sewage system, except:

(a) A septic tank with a subsurface discharge;

(b) A pretreatment facility regulated by a pretreatment program or intermunicipal agreement, approved pursuant to 401 KAR 5:057; **or [~~and~~]**

(c) An authorization by permit or rule that is prepared to assure that underground injection will not endanger a drinking water supply, pursuant to the Safe Drinking Water Act, 42 U.S.C. 300f-300j, and that are issued pursuant to a state or federal Underground Injection Control program; and

(d) An underground injection control well that is permitted pursuant to 40 C.F.R. 144 if

1. The permit is protective of public health and welfare; and

2. The permit prevents the pollution of ground and surface waters. [~~facilities subject to the administrative regulations of this chapter.~~]

(2) Unless exempted pursuant to subsection (3)(b) of this section or paragraph (a) of this subsection, a person shall not construct, modify, or operate a facility without having received a permit from the cabinet.

(a) A construction or modification permit shall not be required for maintenance replacement for components of an existing facility or for changes that [~~which~~] do not affect the treatment processes of the facility, but shall be required for replacement of an entire wastewater treatment plant (WWTP).

(b) The operational permit provisions of Section 27 of this administrative regulation shall be satisfied by those facilities that [~~which~~] have a valid KPDES permit [~~issued pursuant to 401 KAR 5:050 to 401 KAR 5:080~~].

(3) This subsection shall apply to an agricultural waste handling system, industrial WWTP**, or a [~~and~~]** storm water WWTP.

(a) The following requirements shall apply to an agricultural waste [~~wastes~~] handling system [~~systems , as defined by 401 KAR 5:002~~]:

1. An Agricultural waste [~~wastes~~] handling system that conveys, stores, or treats [~~systems which convey, store, or treat~~] manure from a concentrated animal feeding operation [~~operations as defined by 401 KAR 5:002~~] shall:

a. Obtain a permit to construct or modify the facility, pursuant to [~~complying with only~~] Sections 2 and [~~,~~] 24[~~, and 29(1)(h) and (i)~~]of this administrative regulation; and

b. Obtain a KPDES permit**; and** [~~and comply with 401 KAR 5:026 through 5:080~~]**[.]**

2. All other agricultural **waste [~~wastes~~]** handling systems shall:

a. Obtain **a permit [~~permits~~]** to construct, modify, or operate the facility pursuant to [~~this administrative regulation complying with only~~] Sections 2, 24, 25, 27, and **30 [~~29~~]**(1)(h) and (i) of this administrative regulation; and

b. Obtain a Kentucky No Discharge Operational Permit (KNDOP). [~~A KPDES permit shall not be required for these facilities.~~]

(b) The following shall apply to industrial wastewater treatment plants (IWWTPs) [~~as defined by 401 KAR 5:002~~]:

1. An IWWTP [~~IWWTPs~~] with a closed loop system or a system that uses spray irrigation for disposal shall:

a. Obtain a KNDOP permit;

b. Comply with Sections 2, 25, 27, and **30 [~~29~~]** (1)(e) through (h) of this administrative regulation; **and**

c. Not be required to obtain a permit to construct or modify the facility**; [~~.~~]**

[~~systems shall obtain a KNDOP complying with only Sections 2, 25, 27, and 29(1)(e) through (g) of this administrative regulation and any other applicable standard or requirements of 401 KAR Chapter 5. A KPDES permit shall not be required for these facilities.~~]

2. An IWWTP [~~IWWTPs~~] with a discharge to the waters of the Commonwealth shall [~~not be required to obtain a permit to construct or modify the facility. These facilities shall, however~~]:

a. Comply with the [~~"~~] Five Mile Limit Policy [~~" incorporated by reference in Section 29 of this administrative regulation~~];

b. Obtain a KPDES permit to discharge into the waters of the Commonwealth; [~~and~~]

c. Comply with any other applicable standard or requirement [~~all other requirements~~] of 401 KAR Chapter 5; and [~~.~~]

d. Not be required to obtain a permit to construct or modify the facility**; and [~~.~~]**

3. A sewer line that conveys wastewater to an IWWTP [~~lines which convey wastewater to IWWTPs~~] shall not be required to obtain a construction permit.

(c) The following requirements shall apply to a WWTP that collects, conveys, or treats [~~WWTPs which collect, convey, or treat~~] only storm water:

1. A permit to construct or modify the facility shall not be **required [~~require~~]** for a WWTP that collects, conveys, or treats [~~WWTPs which collect, convey, or treat~~] only storm water and discharges [~~discharge~~] into the waters of the Commonwealth [~~shall not be required to obtain a permit to construct or modify the facility pursuant to this administrative regulation~~].

a. These facilities shall [~~, however,~~] comply with 401 KAR 5:035 [~~5:026~~] through 5:080 and **401 KAR** 10:026 through 10:031.

b. 401 KAR 5:060 establishes if [~~further specifies when~~] these facilities shall [~~are required to~~] obtain a KPDES permit.

2. An WWTP that collects, conveys, or treats [~~WWTPs which collect, convey, or treat~~] only storm water and does [~~do~~] not discharge into the waters of the Commonwealth shall obtain an operational permit pursuant to [~~under this administrative regulation, complying with only~~] Sections 2, 25, 27, and **30 [~~29~~]**(1)(e) through (h) [~~(g)~~] of this administrative regulation. [~~A KPDES permit shall not be required for these facilities.~~]

Section 2. Application Submittal. (1) An application to construct, modify, or operate a facility, or renew the operational permit for a facility shall be submitted on the **applicable forms established in this subsection [~~following applicable forms~~]** [~~, incorporated by reference in Section 29 of this administrative regulation,~~] and shall include the applicable supporting information pursuant to [~~required by~~] Section 3 of this administrative regulation, applicable construction permit fees pursuant to [~~required by~~] Section 5 of this administrative regulation, applicable modification or operating permit fees, and plans and specifications for the proposed construction or modification pursuant to [~~required by~~] Section 6 of this administrative regulation.

(a) For construction of a sewer line extension [~~extensions~~], the applicant shall submit a completed Construction Permit Application for Sewer Line Extension [~~, Form S-1, and a fee in accordance with Section 5 of this administrative regulation~~].

(b) For construction of a WWTP or WWTP with a sewer line [~~projects for WWTPs or WWTPs with sewer lines~~] with a direct discharge, the applicant shall submit or shall have submitted:

1. The completed KPDES applications pursuant to [~~required by~~] 401 KAR 5:060; and

2. [~~and~~] A completed Construction Permit Application for Wastewater Treatment Plant. [~~, Form W-1. The applicant shall also submit a construction permit fee in accordance with Section 5 of this administrative regulation and a KPDES permit fee in accordance with KRS 224.70-120.~~]

(c) For a WWTP construction project [~~projects~~] without a discharge other than an agricultural waste handling system [~~systems~~], the applicant shall submit:

1. A completed Construction Permit Application for Wastewater Treatment Plant, Form W-1; and [~~,~~]

2. A completed Kentucky No Discharge Operational Permit Application, Form ND [~~, and a construction permit fee in accordance with Section 5 of this administrative regulation~~].

(d) For an operational permit [~~permits~~] or **renewal [~~renewals~~]** of a Kentucky No Discharge Operational Permit (KNDOP) [~~Permits (KNDOPs)~~] other than an agricultural waste handling system [~~systems~~], the applicant shall submit a completed Kentucky No Discharge Operational Permit Application, Form ND.

(e)1. For construction, renewal, modification, or operation of agricultural **waste [~~wastes~~]** handling systems that do not discharge and do not intend to discharge, the applicant shall submit a completed Kentucky No Discharge Operational Permit Application for Agricultural Wastes Handling Systems, Short Form B.

2. For a construction approval, an applicant [~~approvals, applicants~~] shall also submit a completed Site Survey Request.

(f) For construction of minor modifications to a WWTP, the applicant shall submit a completed Construction Permit Application for Wastewater Treatment Plant [~~and a fee in accordance with Section 5 of this administrative regulation~~].

(g) For WWTP construction projects with a discharge for an individual residence, the applicant shall submit a completed notice of intent for coverage under a general permit issued pursuant to 401 KAR 5:055. [~~Construction Permit Application for Wastewater Treatment Plant, a fee in accordance with Section 5 of this administrative regulation, and the completed KPDES applications required by 401 KAR 5:060.~~]

(h) For operational permits or renewals of operational permits for publicly owned sewer systems that [~~which~~] have at least 5,000 linear feet of sewer line and that [~~which~~] discharge to a sewer system or a WWTP that [~~which~~] is owned by another person, the applicant shall submit a completed Kentucky Inter-System [~~Inter-Municipal~~] Operational Permit Application.

(2) Signatures.

(a) An **application** **[~~applications~~]** and all reports required by the permit [~~permits~~] shall be signed by the responsible corporate officer or the person having primary responsibility for the overall operation of the facility.

1. For a municipality, state, federal**,** or other public agency, the signee shall be a principal executive officer or ranking elected official or the designee.

2. An application or report may be signed by a duly authorized representative, if the authorization has been made in writing by the responsible person.

(b) Certification. A [~~Any~~] person signing a document in accordance with [~~under~~] paragraph (a) of this subsection shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations."

Section 3. Application; Construction Permit Supporting Information. For those facilities required to submit a Construction Permit Application for Wastewater Treatment Plant or Construction Permit Application for Sewer Line Extensions, the following information [~~items~~] shall be submitted [~~as a part of the application or~~] with the application pursuant to [~~required by~~] Section 2 of this administrative regulation [~~, any applicable fee required by Section 5 of this administrative regulation, and the plans and specifications for the construction project required by Section 6 of this administrative regulation~~]:

(1)(a) The applicant shall identify who will inspect and certify that the facility under construction conforms to [~~with~~] the plans and specifications approved by the cabinet in accordance with this administrative regulation.

(b) Facilities designed by an engineer shall be inspected and certified by an engineer; [-]

(2) The applicant shall provide:

(a) An estimate for the cost of the facility and the sources of project funding; [-]

(b) [~~(3) The applicant shall provide~~] A USGS 7.5 minute topographic map with the proposed project site identified; [-]

(c) [~~(4)~~] The North American Datum 1983 (NAD 83), degree, minutes, and seconds measurement of the proposed project's latitude and longitude; and

(d) [~~The applicant shall provide~~] An estimate, and the basis for the estimate, for the average daily flow added by the proposed project; [-]

(3) [~~(5)~~] Closure plan.

(a) If an existing facility or a portion of a facility will be taken out of service, the applicant shall submit a closure plan discussing the following items:

1. How the facility will be constructed and **how** the sewage will be diverted to the new

construction without a bypass to a stream. If a bypass is unavoidable during construction, the applicant shall submit:

a. An explanation of why construction cannot occur without the bypass;

b. An estimate of the shortest duration for the construction to be completed;

c. A description of all equipment, material, labor, and any other item necessary to complete the construction; and

d. An estimate of when the necessary items for the construction will be on-site;

2. How the contents of the facility will be removed and properly disposed;

3. How the abandoned facility will be removed or filled and covered; and

4. How the abandoned sewers will be plugged and manholes filled and covered.

(b) If an existing WWTP discharge is eliminated, the owner of the WWTP shall submit a completed No Discharge Certification [~~, incorporated by reference in Section 29 of this administrative regulation,~~] within thirty (30) days after the elimination of the discharge; [~~.~~]

(4) [~~(6)~~] Preliminary submittal. Applicants for WWTP construction permits may submit the following information prior to formal submittal of the construction application, to allow the applicant to receive a preliminary determination on the suitability of the proposed discharge location and preliminary effluent limits used in the design of the facility.

(a) If the information in this subsection is not submitted prior to the formal submittal, the information shall be submitted with the construction application.

(b) The preliminary determination shall be valid for up to one (1) year after issuance of the preliminary determination or until the issuance of the KPDES permit, whichever occurs first.

(c) The preliminary determination shall not be a guarantee of final permit limits and may be changed as a result of information presented during the public notice phase of the KPDES

permitting procedure.

(d) The preliminary effluent limits shall be [~~are~~] contingent upon the validity, accuracy, and completeness of the following information that the applicant shall submit [~~submitted by the applicant~~]:

1. [~~(a)~~] A reproducible copy of a USGS 7.5 minute topographic map with the projected service area outlined, the proposed WWTP location, and the discharge point identified on the map;

2. [~~(b) If a regional facility plan or water quality management plan is being or has been developed,~~] A letter from the regional planning agency stating whether the applicant's project is compatible with the regional facility plan or water quality management plan [~~. The cabinet shall then make a final determination on the compatibility of the project with the plan~~];

3.a. [~~(c)~~] For a new or an expansion of an existing regional facility pursuant to 401 KAR 5:006, a regional facility plan or water quality management plan.

b. The planning requirements of ["]Recommended Standards for Wastewater Facilities["] (["]Ten States' Standards["]) [~~, incorporated by reference in Section 29 of this administrative regulation,~~] shall be satisfied by the cabinet's approval of a regional facility plan or a water quality management plan; [~~and~~]

4. [~~(d)~~] For a WWTP project [~~projects~~], a demonstration that the users of the proposed WWTP cannot be served by an existing regional facility. [~~The applicant shall demonstrate that a connection to a regional facility is not available.~~] The applicant shall provide a detailed evaluation of alternatives by conducting a twenty (20) year present worth cost analysis.

a. The distance criteria for determining availability shall not apply to a WWTP [~~WWTPs~~] with an average daily design capacity less than or equal to 1,000 gpd.

b. The distance shall be measured along the most feasible route of connection to a point where the downstream sewer has capacity to carry the additional flow; and

5. An estimate and the basis for the estimate of the average daily flow added by the proposed project;

(5) [~~(7)~~] For a WWTP project [~~projects~~], the applicant shall submit the following influent design values:

(a) Average daily flow;

(b) Peak daily flow;

(c) Peak hourly flow;

(d) Peak instantaneous flow;

(e) [~~Influent~~] BOD;

(f) [~~(e)~~] Influent suspended solids; [~~and~~]

(g) Phosphorus; and

(h) [~~(f)~~] Ammonium nitrogen (NH_3-N) ; [~~of the influent.~~]

(6) [~~(8)~~] For a WWTP project [~~projects~~], if the discharge point of a proposed WWTP fails to coincide with a stream indicated as a blue line on a USGS 7.5 minute topographic map, the applicant shall demonstrate that the applicant has a recorded deed, recorded other right of ownership, or recorded right of easement to discharge the applicant's effluent across any land owner's property that [~~which~~] comes between the point of discharge and a blue line stream; [~~.~~]

(7) [~~(9)~~] For a WWTP project [~~projects~~], the applicant shall submit a copy of the plat or survey clearly indicating the property boundaries, the position of the proposed facility, and the position of the dwellings within 200 feet of the WWTP; [~~.~~]

(8) [~~(10)~~] For a WWTP project [~~projects~~], the applicant shall provide a sludge management

plan **that** **[~~which~~]** includes the method of sludge processing and ultimate sludge disposal; [~~.~~]

(9) [~~(11)~~] For a WWTP project [~~projects~~], the applicant shall indicate that laboratory services shall be provided for self-monitoring and process control to ensure that the WWTP operation complies with the permit; and [~~.~~]

(10) [~~(12)~~] For a WWTP project [~~projects~~], the applicant shall submit:

(a) A schematic drawing of the WWTP layout and detailed explanation of the proposed facility and its method of operation;

(b) The WWTP's reliability category and a demonstration of how the WWTP complies with the reliability requirements in Section 13 of this administrative regulation; and

(c) The design calculations [~~criteria~~] used to size the unit processes.

Section 4. Application; Preliminary Considerations. (1) A permit shall not be granted to a [~~any~~] facility that [~~which~~] is not compatible [~~, as determined by the cabinet,~~] with a regional facility plan or with a water quality management plan approved by the cabinet or the U.S. EPA.

(2) A new open-top component of a WWTP shall not be located within 200 feet of an existing dwelling or property line, except:

a. A WWTP that serves an individual residence shall not be required to be at least 200 feet from the dwelling that it serves; and

b. An open-top component of a WWTP may be located within 200 feet of another dwelling that the WWTP does not serve or a property line if:

1. The WWTP or component is enclosed within a building that controls odors and dampens noise; or

2. The applicant demonstrates that an equivalent method for noise and odor control shall be provided.

[~~A WWTP which serves an individual residence may be located within 200 feet of the dwelling that it serves. An open-top WWTP may be located within 200 feet of another dwelling which the WWTP does not serve, only if the WWTP is enclosed within a building which controls odors and dampens noise or the applicant demonstrates an equivalent method for noise and odor control will be provided.~~]

(3) A [~~Any~~] discharge point or [~~and~~] direct **discharge [~~discharges~~]** into a wellhead protection area shall comply with Water Policy Memorandum No. 84-02, [~~(~~]Five Mile Limit Policy, if that public drinking water well or spring is under the direct influence of surface water [~~), incorporated by reference in Section 29 of this administrative regulation~~].

(4) The initial suitability of a [~~any~~] location for a proposed discharge point or spray irrigation field shall be determined by the cabinet after site inspection. In determining the suitability of the location, the cabinet shall [~~may~~] consider **the: (a) [~~:~~**

a. ~~The~~] Distance to the nearest dwelling; [~~,~~]

(b) [~~b.~~]Distance to water intake used for a public water supply; [~~,~~]

(c) [~~c.~~] Downstream land use; [~~,~~]

(d) [~~d.~~]Physical characteristics and current use of the stream; [~~,~~]

(e) [~~e.~~] Physical characteristics of the proposed spray field including karst topography; [~~,~~]

(f) [~~f.~~]Need for easements; [~~,~~]

(g) [~~g.~~] Location of property boundaries; [~~,~~] and

(h) [~~h.~~]Other items consistent with this administrative regulation and KRS Chapter 224.

(5) If the discharge from the WWTP enters a sinkhole directly or enters a disappearing stream, the applicant shall submit a proposal for a groundwater tracer study or results from a previously conducted study to the cabinet.

(a) The cabinet shall accept a groundwater tracer study or a proposal for a groundwater tracer study if it is sufficiently scientifically rigorous to:

1. Establish if a hydrologic connection exists with surface waters that may result in additional or more stringent permit limitations;

2. Establish if a hydrologic connection exists with domestic water supply intakes within five (5) miles; and

3. Establish if a hydrologic connection exists with drinking water wells within five (5) miles.

(b) The cabinet shall notify the applicant of the cabinet's acceptance or denial of a proposed groundwater tracer study.

(c) If the cabinet accepts a proposal for a groundwater tracer study**,** the applicant shall conduct the groundwater tracer study and submit the completed groundwater tracer study to the cabinet.

(d) The cabinet shall issue, deny, or modify the permit based upon the findings of a scientifically rigorous groundwater tracer study.

[~~for approval. The results of the groundwater tracer study shall be submitted to the cabinet for approval. The cabinet will review the results to determine if a discharge is approvable.~~]

(6) The cabinet may condition or deny a permit to construct or expand a facility based on its compatibility with a regional facility plan or the availability of a regional facility.

(a) Permits to construct, expand, or operate a sewage system shall require connection to a regional facility if [~~when~~] one (1) becomes available and shall not be renewed, reissued, or modified to remove that requirement unless a regional facility is no longer available.

(b)The distance criteria to determine if a regional facility is available shall be measured along the most feasible route of connection to a point where the downstream sewer has capacity to

carry the additional flow.

(7) Pursuant to 401 KAR 5:300, the cabinet may coordinate issuance of a construction permit for WWTPs that [~~which~~] require a new KPDES permit or modification to a KPDES permit with the issuance of the KPDES permit to ensure that public comments received as a result of the public notice requirements of 401 KAR 5:075 shall be [~~are~~] considered in the issuance of the construction permit.

(a) The cabinet may also coordinate issuance of construction approval for the associated sewer lines with the issuance of the construction permit for the WWTP.

(b) The cabinet may condition or deny the construction permit based on those public comments.

(8)(a) The cabinet shall issue a notice of deficiency for the deficiencies in the application, fees, supporting information, or plans and specifications.

(b) Failure of the applicant to respond to a notice of deficiency within thirty (30) days shall result in the application being terminated without the issuance of a construction permit.

Section 5. Fees. (1) Except as specified in KRS 224.10-100, 224.16-050, and subsection (5) of this section, the applicant shall submit a construction permit fee as provided in subsection (4) of this section with the construction permit application and any applicable KPDES fee.

(2) If the cabinet denies a construction permit for a WWTP or sewer line, the fee for the construction permit shall be retained by the cabinet, unless the fee is for a WWTP that [~~which~~] serves only an individual residence.

(3) The applicant shall make checks or money orders payable to the Kentucky State Treasurer.

(4) Construction permit fees shall be as shown on the following schedule, except as provided

in subsection (5) of this section.

Facility Category	Construction Permit Fee
Large Facility: WWTP	$1,800
Intermediate Facility: WWTP	$900
Small Facility: WWTP	$450
Minor Modification to a WWTP:	$200
Small Facility for Nonprofit Organizations pursuant to KRS 224.16-050(5):	$50
Large Facility: Sewer Lines	$800
Intermediate Facility: Sewer Lines	$400
Small Facility: Sewer Lines	$200

(5) Fees established in this section shall not apply to an agricultural **waste** **[~~wastes~~]** handling system [~~systems~~] or **to a renewal of a KNDOP permit** **[~~renewals of KNDOP permits~~]**.

(6) The WWTP fee shall apply to the WWTP project and [~~any~~] sewers or pump stations located on the plant property.

(a) A sewer fee shall apply to all sewers, force mains, and pump stations that [~~which~~] are bound together as one (1) set of plans.

(b) If a WWTP project includes sewers, force mains, or pump stations located off of the plant property, at least two (2) fees shall be submitted.

(7) To qualify for the reduced fee in subsection (4) of this section, nonprofit organizations shall submit proof that they are qualified pursuant to 26 U.S.C. 501(c)(3) [~~under Section 501(c)(3) of the Internal Revenue Code~~].

Section 6. Plans and Specifications. (1) The applicant shall submit to the cabinet at least three

(3) sets of detailed plans and specifications for the facility. Plans for gravity sewer lines and force mains shall include a plan view and a profile view. [~~The submittal shall be accompanied by a completed permit application on the forms required by Section 2 of this administrative regulation and the applicable items required by this administrative regulation.~~]

(2) The cabinet may request additional information as is necessary to evaluate the facility to ensure compliance with this administrative regulation.

(3) If cabinet approval is obtained, changes shall not be made to the plans and specifications that [~~which~~] would alter or affect the location, capacity, type of treatment process, discharge location, or quality of effluent without issuance of a modified permit from the cabinet.

(4) If a proposed facility will become a part of a sewer system served by a regional facility or has a projected average daily design capacity of 10,000 gpd or more, the plans and specifications shall be prepared, stamped, signed, and dated by a professional engineer.

(5) The plans shall be accompanied by engineering calculations necessary for the understanding of the basis and design of the facility.

(6) If a proposed facility's design capacity is less than 10,000 gpd, the cabinet may require the plans to be prepared, stamped, signed, and dated by a professional engineer if there is not sufficient operating data available from previous similar installations. Operation data shall demonstrate **that** water quality standards have not been violated and **that** there have not been significant operational problems.

Section 7. Design Considerations. (1)(a) Facilities, except an extended aeration package WWTP [~~WWTPs~~] with an average daily design capacity less than 100,000 gpd, shall be designed in accordance with the ["] Recommended Standards for Wastewater Facilities ["] of the Great Lakes-Upper Mississippi River Board of State Public Health and Environmental

Managers, commonly referred to as ["]Ten States' Standards["~~, 1990 edition, incorporated by reference in Section 29 of this administrative regulation~~].

1. **A deviation [~~Deviations~~]** from the ["]Ten States' Standards["] requirements shall [~~may~~] be approved if the applicant submits a written request for a deviation with the basis for the request **pursuant to this paragraph**.

2. The basis for the deviation request shall be supported by current engineering practice. Some references to current engineering practice may be found in the [~~any "Manual of Practice" published by the Water Environment Federation and "~~] Wastewater Engineering Treatment, Disposal, Reuse [~~", Third Edition,~~] by Metcalfe and Eddy, Inc.

3. Design calculations and other supporting documentation to support the deviation shall be submitted to the cabinet.

(b) Other practices may be required by the cabinet based on the cabinet's best professional judgment that the practices are necessary for the protection of public health and the environment.

(c) Other practices **shall** [~~may~~] be approved by the cabinet if sufficient operational experience is available from previous similar installations to indicate [~~no~~] operational problems have not occurred**, [~~and~~]** that water quality standards have not been violated**, and design calculations and documentation to support the other practice have been submitted to the cabinet**.

(2) [~~Extended aeration package WWTPs, with an average daily design capacity less than 100,000 gpd shall comply with Section 10 of this administrative regulation and any other applicable section.~~

~~(3)~~] The applicant shall demonstrate [~~to the cabinet~~] that the effluent from a proposed facility shall [~~will~~]:

(a) Protect those minimum conditions listed in 401 KAR 10:031 that are applicable to all waters of the Commonwealth [~~found in 401 KAR 5:031~~];

(b) Not cause those waters designated [~~classified~~] by 401 KAR 10:026 [~~5:026~~] or categorized by 401 KAR 10:030 [~~5:030~~] to be of lesser quality than the numeric criteria applicable to those waters in 401 KAR 10:031 [~~5:031~~] or the requirements of 401 KAR 10:030 [~~5:030~~]; and

(c) Be in accordance with any [~~general or particular~~] facility requirement established in [~~mandated by~~] 401 KAR Chapter 5.

(3) [~~(4)~~] Each WWTP shall have a flow measuring device at the plant capable of measuring the anticipated flow, including variations, with an accuracy of ± ten (10) percent.

(a) The flow measuring device shall measure all flow discharged by the WWTP including any bypasses.

(b) An indicating, recording, and totalizing flow measuring device shall be installed at each large WWTP.

(c) **A [~~U~~]** flow measuring device [~~devices~~] for new large WWTPs shall meet the requirements of Section 12 of this administrative regulation.

(4) [~~(5)~~] A bypass or overflow structure [~~structures of any type~~] shall not be constructed in a [~~any~~] sewer line or pump station or at a [~~any~~] WWTP unless**[~~:~~**

~~(a)~~]Construction of the bypass or overflow structure is necessary to prevent loss of life, personal injury, or severe property damage and there is **not a [~~no~~]** feasible alternative**. [~~; or~~**

~~(b) The bypass or overflow structure is for essential maintenance and does not cause effluent limitations or water quality standards, as established in 401 KAR 10:031, to be exceeded.~~] [~~specifically approved by the cabinet in writing.~~]

Section 8. Requirements for Sewer Line Extensions. (1) If the applicant does not own all of

the proposed sewer line extension, the applicant shall identify the owner and the portion of the sewer line extension owned by the other person.

(2) The applicant shall submit letters from:

(a) The owner of the sewer line extension stating that the owner shall [~~will~~] accept operation and maintenance responsibilities for the sewer line extension as [~~when~~] it is constructed;

(b) The owner of the sewer system stating that the owner approves the connection and accepts responsibility for the additional flow; and

(c) The owner of the WWTP stating that the owner approves the connection and accepts responsibility for the additional flow.

(3)(a) The applicant shall demonstrate that the portion of the sewer system used by the connection has adequate capacity to transport the current and anticipated peak flow to the WWTP and that the portion of the sewer system used by the connection shall not be [~~is not~~] subject to excessive infiltration or excessive inflow.

(b) The cabinet may deny a sewer line extension for that portion of the sewer system if the portion of the system is subject to excessive infiltration or excessive inflow unless a plan for investigation and remediation that [~~which~~] addresses these conditions has been submitted [~~approved~~] and is being implemented.

(4)(a) The applicant shall demonstrate that the WWTP that [~~which~~] receives the waste has adequate capacity to treat the current and the anticipated flow and is not subject to excessive infiltration or excessive inflow.

(b) The cabinet may deny the sewer line extension if the WWTP does not have adequate capacity to treat the flow or is subject to excessive infiltration or excessive inflow unless a plan for investigation and remediation that [~~which~~] addresses these conditions has been submitted

[~~approved~~] and the plan is being implemented.

(5) The entrance of groundwater into, or loss of waste from, a new gravity sewer line shall be limited to 200 gpd per inch of diameter per mile of the gravity sewer line. This limitation includes manholes, gravity sewer lines, and appurtenances.

(6)(a) The integrity of a new gravity sewer line shall be verified by either the infiltration-exfiltration or low pressure air testing method.

1. An infiltration-exfiltration test shall be performed with a minimum positive head of two (2) feet.

2. A deflection test shall be performed for each new flexible pipe; pipe deflection shall not exceed five (5) percent.

3. Each new manhole shall be tested for watertightness.

(b) The integrity of a new force main shall be verified by leakage tests. The applicant shall describe the proposed testing methods and leakage limits in the specifications submitted with the permit application.

(7) The construction of a new combined sewer shall not be permitted unless it is a consolidation sewer, flood relief sewer, or a replacement of a combined sewer that:

(a) Conforms with the long-term CSO control plan;

(b) Enhances water quality; and

(c) Protects public health and safety.

(8) A gravity sewer line [~~lines~~] and a force main [~~mains~~] shall be designed and constructed to give mean velocities, when flowing full, of not less than two and zero-tenths (2.0) feet per second.

(a) The roughness coefficient used in the Manning or Kutter's formula shall be 0.013, or the

"C" factor used in the Hazen-Williams Formula shall be 100.

(b) If the specifications allow only plastic pipe, a roughness coefficient of 0.011 or a "C" factor of 120 may be used.

(c) A roughness coefficient [~~coefficients~~] between 0.013 and 0.011 may be used [~~considered~~] for other pipe materials if sufficient documentation of experimental testing is submitted to [~~approved by~~] the cabinet and if the testing supports the use of the design roughness coefficient.

(9) A gravity sewer line [~~lines~~] and a force main [~~mains~~] shall have a minimum of thirty (30) inches of cover or provide comparable protection.

(10) If a gravity sewer line [~~lines~~] and a force main [~~mains~~] are to be constructed in fill areas, the fill areas shall be compacted to ninety-five (95) percent density as determined by the Standard Proctor Density test or to a minimum of ninety (90) percent density as determined by the Modified Proctor Density test prior to the installation of the sewer lines.

(11) The minimum diameter [~~size~~] for a conventional gravity sewer line [~~lines~~] shall be eight (8) inches, except that:

(a) The minimum diameter for an extension to an eight (8) inch or larger sewer line if a future extension is not feasible shall be six (6) inches;

(b) The minimum diameter for an extension to a six (6) inch sewer line shall be six (6) inches; and

(c) A sewer line shall be sized based upon engineering calculations consistent with current engineering practices.

[~~a six (6) inch sewer line may be approved if no future extension is possible. Alternative type sewer systems may be approved if sufficient operational experience is available from previous similar installations to indicate no operational problems have occurred.~~]

(12) A manhole shall be provided at the junction of two (2) building sewers. This subsection shall not apply to building sewers that [~~which~~] serve a single-family residence [~~residences~~].

(13) The following building sewers shall be exempt from the requirements of this administrative regulation:

(a) A gravity sewer [~~sewers~~] that [~~which~~]:

1. [~~Have a diameter of less than eight (8) inches and~~] Discharges [~~Discharge~~] directly to the sewer main; and

2. Serves [~~Serve~~] a single building; and [~~single-family residence building or a multifamily residence building with four (4) dwelling units or less; or~~

~~3. Serve a single office building or a single mercantile building with an occupant load of less than thirty (30) persons.~~]

(b) A force main sewer [~~sewers~~], regardless of the location of the pump station that [~~which~~]:

1. [~~Have a length of less than 500 feet and~~] Discharges [~~Discharge~~] directly to a gravity sewer main; and

2. Serves [~~Serve~~] a single building. [~~single-family residence building or multifamily residence building with four (4) dwelling units or less; or~~

~~3. Serve a single office building or a single mercantile building with an occupant load of less than thirty (30) persons.~~]

(14) Except as provided in paragraph (b) of this subsection, a sewer line [~~sewer lines~~] shall be located at least fifty (50) feet away from an intermittent or perennial stream [~~a stream which appears as a blue line on a USGS 7.5 minute topographic map~~] except where the sewer alignment crosses the stream.

(a) The distance shall be measured from the top of the stream bank.

(b) The applicant may request a variance from the requirement established in this subsection. [~~The cabinet may allow construction within the fifty (50) foot buffer if adequate methods are used to prevent the soil from entering the stream.~~]

(15) A gravity sewer line [~~lines~~] and a force main [~~mains~~] that cross streams shall be constructed by a method that maintains [~~methods which maintain~~] normal stream flow and allows [~~allow~~] for a dry excavation.

(a) Water pumped from the excavation shall be contained and allowed to settle prior to reentering the stream.

(b) Excavation equipment and vehicles shall operate outside of the flowing portion of the stream.

(c) Spoil material from the sewer line excavation shall not be allowed to enter the flowing portion of the stream.

(16) A pump station wetwell [~~wetwells~~] shall be sized such that, based on the average flow, the time to fill the wetwell from the pump-off elevation to the pump-on elevation shall not exceed thirty (30) minutes.

(17) A pump station wetwell [~~wetwells~~] shall have a vent.

(18) A pump **station [~~stations~~]** shall provide a minimum of two (2) hours of detention, based on the average design flow, above the high level alarm elevation or provide an alternate source of power with wetwell storage providing sufficient time for the alternative power source to be activated.

(19) Each high point in the force main shall have **an** automatic air release **valve [~~valves~~]**.

(20) The applicant shall submit a performance curve for a proposed pump station [~~stations~~].

(21) A simplex design shall be used only for a pump station that serves [~~stations which serve~~]

an individual residence or business, and a spare pump shall be available for immediate installation.

Section 9. Municipal Water Pollution Prevention Program. This section applies to owners of regional WWTPs, sewer systems served by regional WWTPs, and political subdivision facilities with KISOPs [~~KIMOPs~~].

(1) For each regional WWTP, the cabinet shall review the WWTP's reported monthly flows and organic loads for the most recent twelve (12) months. If the annual average flow or organic load, or for systems with combined sewer lines the lowest monthly flow and associated organic load, exceed the following values, the cabinet shall advise the owner of the WWTP of the need to address the potential overload condition pursuant to subsection (2) of this section:

(a) For a regional WWTP with a design capacity of ten (10) mgd or less, ninety (90) percent of the WWTP's average daily design capacity; or

(b) For a regional WWTP with a design capacity of more than ten (10) mgd, ninety-five (95) percent of the WWTP's average daily design capacity.

(2) The cabinet shall [~~may~~] deny the approval of a [~~any~~] sewer line extension until the owner of the WWTP **agrees to address** **[~~commits to addressing~~]** the potential overload condition identified in subsection (1) of this section. The owner shall [~~may~~] address the condition by:

(a)**1.** Demonstrating, with supporting documentation, that the average daily design capacity of the plant is greater than the permitted amount**.**

2. [~~,~~**]** **T**he [~~. The~~] cabinet shall review the request and if justified, shall issue a revised average daily design capacity for the WWTP by issuing a modification to the KPDES permit;

(b) Expanding the WWTP to a size sufficient to handle the anticipated flows and loads; or

(c) Performing other remedial measures that [~~which~~] address the condition.

(3) The cabinet shall deny a sewer line extension that is [~~extensions which are~~] of sufficient flow or **adds load [~~add~~]** sufficient **[~~load~~]** to exceed the remaining design capacity of the WWTP or exacerbate water quality problems until the owner of the WWTP **agrees to address [~~commits to addressing~~]** the design capacity or water quality problem. [~~may be denied.~~]

(4) The owners of the following facilities shall conduct a study of the sewer system or the affected portion of the sewer system that [~~which~~] complies with subsections (5) and (6) of this section:

(a) A regional WWTP [~~WWTPs~~] with a reported average flow [~~flows~~] or organic load that exceeds [~~loads which exceed~~] the percent identified in subsection (1)(a) or (b) of this section, as applicable, **or [~~and~~]** a political subdivision KISOP facility that [~~KIMOP facilities which~~] either:

1. Receives [~~Receive~~] more than 275 gallons per capita per day of sewage flow based on the maximum flow received during a twenty-four (24) hour period exclusive of industrial flow; or

2. Receives [~~Receive~~] more than 120 gallons per capita per day of sewage flow based on the annual average of daily flows exclusive of industrial flow; **or [~~and~~]** [~~.~~]

(b) **If subject to excessive infiltration or excessive inflow,** a regional WWTP [~~WWTPs~~], sewer system [~~systems~~] served by a regional WWTP, or a political subdivision facility with a **KISOP [~~KPSOP is~~]** [~~facilities with KIMOPs which are~~] [**~~subject to excessive infiltration or excessive inflow~~**].

(5) The study shall determine if the infiltration-inflow can be removed in a cost-effective manner by using a twenty (20) year present worth cost analysis and if **it cannot be, [~~not~~]**, shall identify the modifications to the sewer system, affected portion of the sewer system, or **affected portion of** the WWTP **[~~that are~~]** necessary to transport and treat the infiltration-inflow.

(a) A schedule for completion of the necessary modifications shall also be prepared.

(b)1. The study and schedule shall be submitted to the cabinet for review and approval.

2. Approval shall be based on cost and length of time required to correct the infiltration-inflow.

(6) For the infiltration-inflow study of the sewer system or the affected portion of the sewer system, the owner shall:

(a) Use a map of the sewer system or the affected portion of the sewer system to select manholes for the installation of flow monitoring equipment;

(b) Install equipment to monitor flow at the key manholes, groundwater levels, and rainfall volume and duration for a period of thirty (30) to ninety (90) days;

(c) Conduct physical surveys, smoke tests, and dye water studies of the affected portion of the sewer system;

(d) Evaluate the cost-effectiveness of transportation and treatment versus correction of the infiltration-inflow sources by using a twenty (20) year present worth cost analysis;

(e) [~~If justified,~~] Internally inspect the sewer lines in the affected portion of the sewer system to determine the rehabilitation locations and methods if the rehabilitation locations and methods cannot be established by other analysis;

(f) Develop plans for rehabilitation of the affected portion of the sewer system or modifications to the affected portion of the facility necessary to transport and treat all flows; and

(g) Develop a schedule for completion of the rehabilitation or modifications.

(7)(a) The owner of the facility shall complete the necessary rehabilitation or modifications in accordance with the [~~approved~~] schedule to which the applicant and cabinet agree.

(b) The cabinet may deny a further sewer line extension [~~extensions~~] if the owner is not meeting the schedule or is not making [~~acceptable~~] progress that follows [~~toward meeting~~] the

[~~approved~~] schedule.

Section 10. Extended Aeration Package WWTP Requirements. This section shall apply to an extended aeration package WWTP [~~WWTPs~~] intended to treat only domestic sewage but shall not apply to an extended aeration package WWTP that serves [~~WWTPs which serve~~] an individual residence.

(1) A bar screen shall be provided for each plant, except those with trash traps pursuant to Section 14 of this administrative regulation.

(2) The aeration chamber shall have a minimum detention time of twenty-four (24) hours based on the average design flow.

(3) A minimum of 2,050 cubic feet of air shall be provided per pound of BOD.

(4) The clarifier shall have:

(a) A minimum detention time of four (4) hours based on the average design flow; [~~,~~]

(b) A surface overflow rate of less than 1,000 GPD/ft^2; [~~,~~] and

(c) A solids loading of less than thirty-five (35) lb/ft^2 based on the peak daily design flow rate.

(5) A positive sludge return shall be provided.

(6)(a) A source of water shall be provided for cleanup.

(b) If a potable source is provided, backflow preventers shall be installed to protect the water supply.

(7) Fencing with a lockable gate shall be installed around the plant site.

(8) An all-weather access road to the plant shall be provided.

(9) A sludge holding system shall be provided for each large WWTP. The sludge holding system shall:

(a) Provide two (2) cubic feet of volume per 100 gallons of WWTP design treatment capacity;

(b) Provide thirty (30) cubic feet per minute (cfm) of air per 1,000 cubic feet of tank volume;

(c) Be designed to prevent overflows; and

(d) Transport supernatant to the aeration chamber.

(10) For a large WWTP [~~WWTPs~~], motors and blowers shall be installed sufficient to handle the load if the largest unit is taken out of service.

(11) [~~If food grinders are used, treatment units shall be designed for treating the additional BOD loading; additional treatment processes may be required.~~

~~(12)~~] Post aeration, if required by effluent limits, shall be designed to raise the effluent dissolved oxygen from two (2) mg/l to the required effluent concentration.

(a) If a diffused air system is used, a minimum blower capacity of 0.154 cubic feet per minute (cfm) per 1,000 gallons of average daily design capacity shall be provided.

(b) If a step aeration ladder is used, a minimum drop of nineteen (19) feet shall be provided.

(12) [~~(13)~~] A WWTP [~~WWTPs~~] with **a** monthly average permit **limit** **[~~limits~~]** for CBOD of twenty (20) mg/l or less shall provide additional treatment **[~~units~~]**.

(13) [~~(14)~~] A WWTP that serves **a restaurant or other similar establishment where food is prepared and served and a food grinder is** [~~WWTPs which serve~~] **[~~restaurants or other similar establishments where food is prepared and served and food grinders are~~]** used shall be designed to treat the additional BOD loading.

(14) [~~(15)~~] Effluent discharge piping for a new WWTP [~~WWTPs~~], except a regional facility [~~facilities~~], shall be designed to transport sewage to facilitate a future connection to a regional facility.

(15) [~~(16)~~] A used package extended aeration WWTP [~~WWTPs~~] may be used if the manufacturer or a professional engineer certifies that the tank is structurally sound and all mechanical equipment has been reconditioned.

Section 11. Disinfection. (1) All WWTPs shall have a disinfection process that [~~which~~] meets the following requirements:

(a) An ultraviolet disinfection system designed to treat the anticipated peak hourly flow;

(b) A chlorination system with a flow or demand proportional feed system.

1. The chlorine contact tank shall have a minimum detention time of thirty (30) minutes based on the average flow, or fifteen (15) minutes based on the peak hourly flow, whichever requires the larger tank size.

2. A WWTP [~~WWTPs~~] shall also have a dechlorination system with a flow or demand proportional feed system if necessary to meet the effluent limits; **[~~or~~]**

(c) A chlorination system with a manually controlled feed system and a flow equalization basin designed to eliminate the diurnal flow variations.

1. The flow equalization basin shall meet the requirements of Section 17 of this administrative regulation.

2. The chlorine contact tank shall have a minimum detention time of thirty (30) minutes based on the average design flow or fifteen (15) minutes based on peak hourly flow.

3. A WWTP [~~WWTPs~~] shall also have a dechlorination system if necessary to meet the effluent limits**; or [~~.~~]**

(d) Other disinfection processes may be approved if they provide [~~providing~~] equivalent treatment [~~may be approved by the cabinet~~].

(2) Tablet type chlorination equipment shall not be used in an intermediate or large WWTP

[~~WWTPs~~].

Section 12. Requirements for Flow Measuring Devices. This section shall apply to a new large WWTP [~~WWTPs~~].

(1)(a) Each flow measuring device shall be capable of measuring the anticipated flow, including variations, with an accuracy of ± ten (10) percent.

(b) The flow measuring device shall measure all flow received at the WWTP.

(c) An indicating, recording, and totalizing flow measuring device shall be installed at each large WWTP.

(2)(a) [~~(1)(a)~~] If the influent and effluent flow are expected to be significantly different, flow measuring devices shall be provided for both the influent and the effluent flow.

(b) Multiple flow measuring devices shall be provided for the following:

1. A WWTP [~~WWTPs~~] that stores [~~store~~] and hydrographically controls [~~control~~] the release of effluent;

2. A WWTP [~~WWTPs~~] with flow equalization facilities that [~~which~~] are designed to store more than the volume required to dampen the diurnal flow variations;

3. A WWTP [~~WWTPs~~] with **a lagoon that has [~~lagoons that have~~]** a detention time of greater than twenty-four (24) hours;

4. A WWTP [~~WWTPs~~] with the capability to bypass a treatment process; and

5. A WWTP [~~WWTPs~~] with more than one (1) discharge point.

(3) [~~(2)~~] Sharp crested weirs shall be used for measuring effluent flow only and shall have the following characteristics:

(a) The weir shall be installed perpendicular to the axis of flow, and there shall not be [~~no~~] leakage at the weir edges or bottom;

(b) The weir plate shall be level and adjustable;

(c) The sides of a rectangular contracted weir shall be vertical;

(d) The angles of a V-notch weir [~~weirs~~] shall be cut precisely;

(e) The thickness of the weir crest shall be less than one-tenth (0.1) of an inch;

(f) The distance from the weir crest to the bottom of the approach channel shall be more than one (1) foot or two (2) times the maximum weir head, whichever is greater;

(g) For a weir [~~weirs~~] other than a suppressed, rectangular weir [~~weirs~~], the distance from the sides of the weir to the sides of the approach channel shall be more than (1) foot or two (2) times the maximum weir head, whichever is greater;

(h) Air shall circulate freely under, and on both sides of, the nappe;

(i) The measurement of head on the weir shall be made at least four (4) times the maximum weir head upstream from the weir crest;

(j)1. The cross-sectional area of the approach channel shall be at least eight (8) times the area of the nappe.

2. The approach channel shall be straight and uniform upstream from the weir for a distance of fifteen (15) times the maximum weir head;

(k) The minimum acceptable weir head shall be two-tenths (0.2) foot;

(l) The maximum downstream pool level shall be at least two-tenths (0.2) foot below the crest elevation;

(m)The weir length for a rectangular, suppressed, or cipolletti weir shall be at least three (3) times the maximum weir head; and

(n) A reference staff gauge shall be provided.

(4) [~~(3)~~] Parshall flumes may be used to measure influent or effluent flows and shall have the

following characteristics:

(a) The approach channel upstream of the flume shall be straight and have a width uniform for the length required by the following:

1. If the flume throat width is less than one-half (1/2) the width of the approach channel, the straight upstream channel length shall be twenty (20) times the throat width;

2. If the flume throat width is equal to or larger than one-half (1/2) the width of the approach channel, the straight upstream length shall be greater than ten (10) times the approach channel width; and

3. If the cross-sectional area of the inlet to the approach channel is smaller than the cross-sectional area of the approach channel, additional straight upstream channel length may be required to dissipate the velocity if necessary to maintain laminar flow;

(b) The throat section walls shall be vertical;

(c) The head measuring point shall be at two-thirds (2/3) the length of the converging sidewall;

(d) The flow shall be evenly distributed across the channel, shall be free of turbulence or waves, and shall not be located after transition sections;

(e) The longitudinal and lateral axes of the converging crest floor shall be level;

(f) Free flow conditions shall be maintained; and

(g) A reference staff gauge shall be provided for H_a and H_b to determine if submergence occurs.

(5) [~~(4)~~] Other types of flow measuring devices shall [~~may~~] be approved [~~by the cabinet~~] if the device reasonably and accurately measures the flow.

Section 13. Reliability Categories. (1) A WWTP design shall:

(a) Provide sufficient treatment units to allow for cleaning and repair without causing a violation of effluent limitations or a bypass from the sewer system or WWTP; and

(b) Provide storage or treatment capability sufficient to:

1. Contain or treat the volume of the largest tank if that tank is out of service; and

2. Contain or treat the flow received during the time needed to drain, complete cleaning, and accomplish an anticipated repair without causing a permit violation or bypass of a treatment process.

(2) The cabinet shall determine the reliability grade of a WWTP based on the water quality use designation of the receiving stream, pursuant to 401 KAR 10:031.

(a) A Grade A WWTP shall have:

1. Treatment units and alternate power sufficient for the continuous use of all treatment processes and disinfection, with the exception of alternate power for the aeration equipment used in an activated sludge process; and

2. Full alternate power capacity for a discharge to a stream segment within five (5) miles of a public water supply intake.

(b) A Grade B WWTP shall have:

1.**a.** Treatment units sufficient for the continuous use of the preliminary, primary, and secondary treatment processes and disinfection; and

b. **[**~~2.~~**]** If an intermediate or large facility, alternate power sufficient for the continuous use of the preliminary, primary, secondary treatment, and disinfection processes, with the exception of alternate power for the aeration equipment used in an activated sludge process; or

2. **[**~~3.~~**]** If a small facility, a design that enables the small facility to connect to an emergency generator.

(c) A Grade C WWTP shall have:

1. **a.** Treatment units sufficient for the continuous use of the preliminary treatment, primary treatment, and disinfection processes; and

b. **[~~2.~~]** If an intermediate or large facility, alternate power sufficient for the continuous use of the preliminary treatment, primary treatment, and disinfection processes; or

2. **[~~3.~~]** If a small facility, a design that enables the small facility to connect to an emergency generator.

(d) If alternate power is required pursuant to this subsection:

1. Alternative power shall be provided from the connection to at least two (2) independent power sources or an emergency generator; or

2. The cabinet may approve alternative measures for **an intermediate [~~a medium~~]** or small facility if:

a. The applicant can demonstrate that those measures provide protection comparable to alternative power; and

b. The receiving stream is not an OSRW, within five (5) miles of a public water supply intake, or within five (5) miles of a wellhead protection area.

(3) The following WWTPs shall meet the requirements for a Grade A WWTP:

(a) A WWTP approved to discharge to a water body designated as an Outstanding State Resource Water pursuant to 401 KAR 10:031.

(b) A WWTP approved to discharge into a sinkhole or disappearing stream; and

(c) A WWTP approved to discharge within five (5) miles of a public water supply intake or discharge directly into a wellhead protection area.

(4) A WWTP shall meet the requirements for a Grade B WWTP if it discharges within five

(5) miles upstream of the head of an embayment if the lake is at normal elevation.

(5) Except as provided in subsection (6) of this section, a WWTP shall, at minimum, meet the requirements for a Grade C WWTP.

(6) The cabinet shall not assign a grade to:

(a) A WWTP treating less than or equal to 1,000 gallons per day; or

(b) A WWTP serving an individual family residence.

[~~The cabinet shall determine the reliability categories of a WWTP based on factors such as the size of the discharge, the size of the receiving stream, and downstream water quality classifications.~~

~~(1) WWTP reliability categories are divided into three (3) grades:~~

~~(a) Grade One WWTPs shall have redundancy in units and alternate power sufficient for the continuous use of all treatment processes and disinfection;~~

~~(b) Grade Two WWTPs shall have redundancy in units and alternate power sufficient for the continuous use of the preliminary, primary, and secondary treatment processes and disinfection; and~~

~~(c) Grade Three WWTPs shall have redundancy in units and alternate power sufficient for the continuous use of the preliminary and primary treatment processes and disinfection.~~

~~(2) WWTPs which discharge to a waterbody designated in 401 KAR 5:030 as a waterbody whose quality exceeds that necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water shall meet the requirements of a Grade One reliability category if the average daily design capacity is greater than twenty (20) percent of the seven (7) day, ten (10) year (7Q10) low flow of the receiving stream.~~

~~(3) WWTPs which discharge into sinkholes or disappearing streams shall meet the requirements of a Grade One reliability category.~~

~~(4) WWTPs which discharge within five (5) miles of a public water supply intake or discharge directly into a wellhead protection area shall meet the requirements of a Grade One reliability category.~~

~~(5) WWTPs which discharge to a waterbody designated in 401 KAR 5:030 as a waterbody whose quality exceeds that necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water shall meet the requirements of a Grade Two reliability category if the average daily design capacity is equal to or less than twenty (20) percent of the 7Q10 low flow.~~

~~(6) Large WWTPs which discharge within five (5) miles upstream of the head of an embayment when the lake is at normal pool elevation shall meet the requirements of a Grade Two reliability category.~~

~~(7) Large WWTPs shall, at a minimum, meet the requirements of a Grade Three reliability category.~~

~~(8) WWTPs which are subject to reliability requirements shall:~~

~~(a) Provide sufficient units to allow for cleaning and repair without causing a violation of effluent limitations or a bypass from the sewer system or the WWTP. This shall require storage or treatment capability sufficient to contain or treat the volume of the largest tank and the flow received during the time needed to drain, complete cleaning, and accomplish any anticipated repair without causing a permit violation or bypass of any treatment process; and~~

~~(b) Provide alternate power from the connection of at least two (2) independent power sources such as substations, an emergency generator, or comparable protection.~~]

Section 14. Requirements for Trash Traps. A trash trap [~~traps~~] shall not be used on a WWTP [~~WWTPs~~] with a design capacity of larger than 100,000 gpd. A trash trap [~~traps~~] shall have an outlet baffle, be accessible to cleaning equipment, have air-tight access openings for cleaning,

allow for cleaning in front of baffles, and have a volume required by this section.

(1) For a small WWTP [~~WWTPs~~], the trash trap volume shall be fifteen (15) percent of the average daily design flow; and

(2) For an intermediate or large WWTP [~~WWTPs~~] with a design capacity of 100,000 gpd or less, the trash trap volume shall be as indicated in the following table for the appropriate WWTP capacity. For capacities not included, the volume shall be interpolated.

WWTP Capacity (GPD)	Trash Trap Volume (Gallons)
10000	1500
20000	2400
30000	2900
40000	3200
50000	3430
60000	3600
70000	3740
80000	3840
90000	3920
100000	4000

Section 15. Requirements for Slow Sand Filters. (1) Wastewater loading shall not exceed five (5) GPD per square foot of filter surface area.

(2) Filter areas larger than 900 square feet shall have multiple beds.

(3) The discharge piping on the filter bed shall be located so that the maximum lateral travel over the sand is less than twenty (20) feet.

(4) Each discharge point shall serve a maximum of 300 square feet of filter surface.

(5) Each discharge point shall have a splash block with a minimum surface area of nine (9) square feet and a square or circular shape.

(6) Distribution piping shall be designed to drain properly.

(7) An underdrain [~~Underdrains~~] shall be spaced on ten (10) foot centers or less.

(8) Gravel shall be placed around the underdrain [~~underdrains~~] and to a depth of six (6) inches over the top of the underdrain [~~underdrains~~].

(9) The filter bed shall have at least thirty (30) inches of sand with an effective size between three-tenths (0.3) and five-tenths (0.5) millimeter.

(10) The dosing chamber shall have a volume sufficient to provide a depth of two (2) inches over the entire filter bed.

Section 16. Requirements for Rapid Sand or Mixed Media Filters. (1) Rapid sand or mixed media filter loadings shall not exceed one (1) gallon per minute per square foot of filter surface area.

(2) If flow equalization is provided, the allowable loading may be increased to two (2) gallons per minute per square foot.

(3) A backwash system shall be provided.

Section 17. Requirements for Flow Equalization Basins. (1) A flow equalization basin [~~basins~~] shall have:

(a) A variable flow weir box set to deliver flow at a treatable rate;

(b) A minimum of 1.25 cfm of diffused air per 1,000 gallons of flow equalization volume;

(c) An emergency overflow to an appropriate point in the treatment scheme; and

(d) Sufficient volume to dampen the diurnal flow variations.

(2) If [~~no~~] site specific information or [~~nor~~] similar flow pattern is not available, the flow equalization basin volume shall be based on the following formula:

V = (1- t/24) x Q

Where:

V is the required volume for the flow equalization basin;

t is the number of hours flow is generated; and

Q is the volume of flow anticipated to be received at the WWTP during a twenty-four (24) hour period.

(3) A flow equalization basin [~~basins~~] with earth embankments shall be constructed with a slope **not [~~no~~]** steeper than 1:3 (one to three) unless a steeper slope is supported by geotechnical and slope stability studies.

(4) For a flow equalization basin [~~basins~~] constructed in material other than earth, the applicant shall indicate how the basin will be properly sealed.

Section 18. Requirements for Wastewater Treatment Lagoons. (1) BOD loading shall be less than**:**

(a) Thirty-five (35) pounds per day per acre of lagoon surface for **a** nonaerated primary lagoon **system [~~systems~~]**; [~~,~~]

(b) Fifty (50) pounds per day per acre of lagoon surface for **a** nonaerated polishing **lagoon [~~lagoons~~]**; [~~,~~] and

(c) 150 pounds per day per acre of lagoon surface for **an aerated lagoon [~~aerated lagoons~~]**.

(2)(a) The lagoon design submittal shall provide details on the aeration system proposed including:

1. The type, location, and capacity of the aeration units;

2. The operating depth;

3. The area of the lagoon at the operating depth;

4. Permeability and thickness of the lagoon liner;

5. Anticipated ultimate wastewater flow; and

6. Influent wastewater characteristics.

(b) A new lagoon system [~~systems~~] shall be designed to treat a raw wastewater BOD of at least 240 mg/l.

(c) The lagoon design shall be evaluated by the method established [~~discussed~~] in ["] Ten States' Standards [~~", incorporated by reference in Section 29 of this administrative regulation,~~] and the predicted BOD remaining shall be less than the required effluent concentration.

(3) A lagoon [~~Lagoons~~] shall be at least 200 feet from any present [~~or future~~] residence or adjacent property line.

(4) A nonaerated primary lagoon [~~lagoons~~]shall have a minimum detention time of ninety (90) days.

(5) The ["] Ten States' Standards ["] requirement for vegetation to be established prior to filling the lagoon shall not apply.

(6) **An applicant [~~Applicants~~]** proposing [~~The cabinet may approve~~] a lagoon with an embankment slope steeper than [~~1:3 (~~] one to three [~~)~~] (1:3) shall provide [~~if supported by~~] geotechnical and slope stability studies to support the design.

(7) The applicant shall indicate how a basin [~~basins~~] constructed in material other than earth will be properly sealed.

Section 19. Additional Requirements for WWTPs That [W~~hich~~] Serve Schools. In addition to the requirements of Sections 10 **through [~~to~~]** 18 of this administrative regulation, the

following requirements shall apply to a WWTP that serves **a school** [~~WWTPs which serve~~] **[~~schools~~]**:

(1) If a flow equalization basin is provided it shall meet the requirements of Section 17 of this administrative regulation; [~~.~~]

(2) The aeration tank shall have at least ten (10) gallons of capacity per day per student for **an elementary or middle school, and [~~elementary and middle schools, or~~]** at least twenty (20) gallons of capacity per day per student for **a high school [~~high schools~~]**; and [~~.~~]

(3) The secondary clarifier shall be sized to provide a maximum surface loading, at the average design flow, of 300 GPD per square foot of clarifier surface area. If a [~~no~~] flow equalization basin is not provided, the secondary clarifier shall be sized to provide a maximum surface loading of 100 GPD per square foot at average daily design flow.

Section 20. Additional Requirements for WWTPs That [W~~hich~~] Serve Multifamily Residential Developments. In addition to the requirements of Sections 10 **through [~~to~~]** 18 of this administrative regulation, the following requirements shall apply to a WWTP that serves a [~~WWTPs which serve~~] multifamily residential development [~~developments~~]. A multifamily residential development [~~developments~~] including subdivisions, condominiums, apartments, and mobile home parks shall provide one (1) or more of the following measures for additional reliability:

(1) Blowers and motors shall be installed sufficient to handle the organic load if the largest unit is not available for service;

(2) An alternate source of power; or

(3) Additional treatment units or processes.

Section 21. Additional Requirements for WWTPs That [~~Which~~] Propose Effluent Disposal

by Spray Irrigation. In addition to the requirements of Sections 10 **through** **[~~to~~]** 18 of this administrative regulation, the **[~~following~~]** requirements **in this section shall** apply to a WWTP that proposes [~~WWTPs which propose~~] effluent disposal by spray irrigation.

(1) One (1) acre of spray field shall be provided for each 1,000 GPD of treated wastewater. **An applicant** **[~~Applicants~~]** proposing **a** higher application **rate** **[~~rates~~]** shall provide [~~may be approved if justified by a~~] detailed design based on site-specific [~~site specific~~] information.

(2) The following plans and specifications shall be signed, sealed, and dated by a professional engineer licensed in Kentucky:

(a) Plans for a WWTP with a design capacity of more than 1,000 gallons per day that propose an application rate greater than 1,000 gallons per acre per day; and

(b) Plans that propose a final slope equal to or greater than ten (10) percent.

(3) A spray field that has a slope greater than twenty-five (25) percent on any portion of the spray field shall not be permitted.

(4) The soil of a spray irrigation field shall have an average saturated hydraulic conductivity of not less than six-tenths (0.6) inch per hour, as established by:

(a) The saturated hydraulic conductivity value provided by an NRCS soil survey; or

(b) A saturated soil test of the spray field.

(5) The spray field shall have less than a six (6) percent slope unless

(a) The average saturated hydraulic conductivity for the spray field is more than six (6) inches per hour; and

(b) The average soil depth of the spray field is at least twenty-four (24) inches.

(6) The spray irrigation field shall [~~, have moderate to high soil permeability, and~~] have sufficient vegetative growth to promote absorption, evaporation, and transpiration.

(a) Vegetative growth shall be perennial.

(b) Vegetative growth shall cover not less than ninety-five (95) percent of the spray field area.

[~~(3) A WWTP capable of meeting secondary treatment which meets the requirements of 401 KAR 5:045 and disinfection shall be provided prior to irrigation.~~

~~(4)~~] (7) A twenty (20) foot buffer zone shall be provided between the outer boundary of the spray field and the property boundary or the applicant shall provide screening to inhibit the transport of aerosols and windborne spray across property boundaries.

(8) [~~(5)~~] A spray irrigation field for an individual residence shall have a temporal or physical barrier that inhibits human contact with airborne spray. [~~:~~

~~(a) At least three (3) sprinkler heads;~~

~~(b) A spray area larger than 0.19 acre; and~~

~~(c) A barrier around the spray field.~~

~~(d) The spray irrigation field shall be located at least 200 feet from the nearest dwelling.~~

~~(e)~~] (9) Effluent from the spray irrigation field shall be contained on the owner's property.

(10) Setbacks. (a) A construction permit shall not be issued if a portion of the spray field is closer than 200 feet from an existing dwelling.

(b) A portion of a spray field shall not be closer than the minimum setback requirements for a leach bed as established in 902 KAR 10:085, Section 8.

(c) If a setback provision of 902 KAR 10:085, Section 8 is less stringent than the setback requirements of this subsection, the more stringent setback shall apply.

(11) Effluent derived from a wastewater that contained human waste shall not be applied to an area in active production of food for human consumption.

(12) A spray irrigation field for an individual residence shall have the following additional requirements:

(a) At least three (3) sprinkler heads;

(b) A spray area larger than 0.19 acre; and

(c) A spray area larger than 0.38 acres if the slope is equal to or greater than six (6) percent.

Section 22. Requirements for WWTPs that [~~which~~] Serve an Individual Residence. (1) A wastewater plant [~~plants~~] intended to serve an individual residence and eligible for a general KPDES permit pursuant to [~~under~~] 401 KAR 5:055 shall have, at minimum, the following treatment processes:

(a) Extended aeration; [~~WWTP,~~]

(b) Filtration; [~~,~~] and

(c) Disinfection.

(2) The WWTP shall be capable of meeting the final effluent limitations of the general permit.

(3) The WWTP shall be capable of meeting secondary treatment requirements of 401 KAR 5:045 prior to filtration [~~without additional treatment units~~].

(4) The cabinet may allow an alternative or additional treatment process to extended aeration if an alternative process is necessary to meet the requirements of a general permit issued pursuant to 401 KAR 5:055.

(5) [~~(2)~~] A minimum lot size of one (1) acre shall be provided for WWTPs located within a residential subdivision.

(6) [~~(3)~~] A WWTP serving an individual residence and proposing effluent disposal by spray irrigation shall also comply with Section 21 of this administrative regulation.

(7) Setback restrictions for a treatment system serving an individual residence shall not be less than the setback restrictions established by 902 KAR 10:085 Section 8, Table 7.

(8) An applicant may submit only one (1) of the three (3) copies of the plans and **specifications [~~specification~~]** required pursuant to Section 6 of this administrative regulation.

Section 23. Additional Requirements for extended aeration WWTPs that [~~which~~] Serve Car Washes or Laundries. [~~In addition to the requirements of Sections 10 to 18 of this administrative regulation,~~] An extended aeration WWTP that serves a [~~WWTPs which serve~~] commercial or fleet car wash [~~washes~~], commercial laundry [~~laundries~~], or laundry [~~laundries~~] serving a commercial or institutional establishment [~~establishments~~], shall have an average daily flow from other biochemically degradable sources that is at least four (4) [~~which is at least five (5)~~] times greater than the anticipated flow of the car wash, commercial laundry, or laundry serving a commercial or institutional establishment.

Section 24. The Construction Permit. (1)(a) A permit to construct a facility shall be effective upon issuance unless otherwise conditioned. [~~Construction shall be completed within twelve (12) months unless additional time is requested.~~]

(b) If construction is not commenced within the twenty-four (24) [~~twelve (12)~~] months following a permit's issuance, a new permit shall be obtained before construction may begin. [~~The cabinet may allow a single twelve (12) month extension to begin construction if site conditions have not changed.~~]

(2)(a) The permittee shall submit the certification from an [~~the~~] engineer that the facility was constructed in conformity with the plans and specifications approved by the cabinet in accordance with this administrative regulation within thirty (30) days from the completion of construction.

(b) The permittee shall certify the completion of construction [~~may submit the certification~~] for a project [~~projects~~] not designed by an engineer. [~~Failure to comply with this subsection may result in the denial of sewer line extensions to the incomplete facility.~~]

(3) [~~The permit is issued to the applicant and the permittee shall remain the responsible party for compliance with all applicable statutes and administrative regulations until a notarized applicable change in ownership certification , incorporated by reference in Section 29 of this administrative regulation, is submitted and the transfer of ownership is acknowledged by the cabinet.~~

~~(4)~~] Permit conditions.

(a) Permits may contain special conditions that in the best professional judgment of the cabinet are necessary to comply with KRS Chapter 224 and 401 KAR **Chapters [~~Chapter~~]** 4 through 11 [~~administrative regulations promulgated pursuant thereto~~]. The conditions shall be in writing and treated as a part of the permit.

(b) The following conditions shall apply to all construction permits:

1. There shall not be [~~no~~] deviations from the plans and specifications submitted with the application or the conditions specified in this subsection, unless authorized in writing by the cabinet; and [~~.~~]

2. The permittee shall ensure that the effluent is of satisfactory quality to prevent violations of the standards in 401 KAR Chapter 5 and 401 KAR Chapter 10.

[~~3. When the construction of the system is completed, the owner shall submit a written certification to the cabinet that the facility has been constructed and tested in accordance with the approved plans and approval conditions. Failure to certify may result in penalty assessments or future approvals being withheld.~~]

(c) The following conditions shall also apply to a construction permit [~~permits~~] issued to a WWTP that discharges [~~WWTPs which discharge~~] to waters of the Commonwealth:

1. [~~If violations of the standards of 401 KAR Chapter 5 result from the discharge of the treated effluent, the owner shall provide additional treatment or an extension of the effluent line;~~

~~2.~~] If a sewer system served by a regional facility becomes available, the WWTP shall be abandoned and the influent flow shall be diverted to the regional facility; and

2. [~~3.~~] Issuance of this permit shall [~~does~~] not relieve the permittee from the responsibility of obtaining [~~any~~] other permits or licenses required by this cabinet and other state, federal, **or [~~and~~]** local agencies.

(4) [~~(5)~~] The construction permit for an agricultural **waste [~~wastes~~]** handling system [~~systems~~] may be used as an interim operational permit until the operational permit is issued or denied.

(5) [~~(6)~~] The issuance of a permit by the cabinet shall not convey any property rights [~~of any kind~~] or any exclusive privilege.

Section 25. Kentucky No Discharge Operational Permits (KNDOPs). A Kentucky No Discharge Operational Permit (KNDOP) shall only be issued to a facility that does not discharge and **[~~not~~]** does not intend to [~~(1) Applicability. These permits are issued to facilities which do not~~] discharge to waters of the Commonwealth, including agricultural **waste [~~wastes~~]** handling systems and facilities that [~~which~~] dispose of **[~~their~~]** effluent by spray irrigation. [~~If the permit is issued to the applicant, the permittee shall remain the responsible party for compliance with all applicable statutes and administrative regulations until a notarized applicable change in ownership certification, incorporated by reference in Section 29 of this administrative regulation, is submitted and the transfer of ownership is acknowledged by the cabinet. (2)~~]

(1) Nutrient Management Plans. An animal feeding operation shall have a nutrient management plan consistent with the Agriculture Water Quality Act, KRS 224.71-100 through **224.71-145 [~~224.72-145~~]** and the NRCS Conservation Practice Standard Code 590 for Kentucky.

(2) The plan shall, to the extent applicable, also address the following elements:

(a) Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities;

(b) Ensure proper management of animal mortalities to ensure that they shall not be disposed of in liquid manure, storm water, or process wastewater storage or treatment system;

(c) Ensure that clean water shall be diverted from the production area;

(d) Prevent direct contact of confined animals with waters of the Commonwealth;

(e) Ensure that chemicals and other contaminants handled on-site shall not be disposed of in manure, litter, process wastewater, or storm water storage or treatment system, unless specifically designed to treat chemicals and other contaminants;

(f) Identify site-specific conservation practices to be implemented to control runoff of pollutants to waters of the Commonwealth;

(g) Identify protocols for testing of manure, litter, process wastewater, and soil;

(h) Establish protocols to land apply manure, litter, or process wastewater in accordance with site-specific nutrient management practices that ensure agricultural utilization of the nutrients in the manure, litter, or process wastewater; and

(i) Identify records that shall be maintained to document the implementation and management of the minimum elements described in paragraphs (a) through (h) of this subsection.

(3) Additional Measures for Animal Feeding Operations.

(a) Visual inspections. There shall be routine visual inspections of the production area. The

following shall be visually inspected:

1. Weekly inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage and containment structure;

2. Daily **inspections [~~inspection~~]** of drinking water or cooling water lines; and

3. Weekly inspections of the manure, litter, and process wastewater impoundments. The inspection shall note the level in liquid impoundments as indicated by the depth marker in paragraph (b) of this subsection.

(b) Depth marker. An open surface liquid impoundment shall have a depth marker that clearly indicates the storage capacity.

(c) Corrective actions. A deficiency found as a result of an inspection shall be corrected.

(d) Mortality handling. A mortality shall not be disposed of in liquid manure or process wastewater system and shall be handled in a way that prevents the discharge of pollutants to surface water.

(4) Record Keeping Requirements for the Production Area. Each AFO shall maintain on-site, for a period of five (5) years from the date they are created, a complete copy of the information required by subsection (2)(i) of this section, and the records specified in paragraphs (a) through (f) of this subsection. The AFO shall make these records available to the cabinet for review upon request.

(a) Records documenting the inspections required pursuant to subsection (3)(a) of this section;

(b) Weekly records of the depth of the manure and process wastewater in the liquid impoundment as indicated by the depth marker pursuant to subsection (3)(b) of this section;

(c) Records documenting an action taken to correct deficiencies required pursuant to subsection (3)(c) of this section. Deficiencies not corrected within thirty (30) days shall be accompanied by an explanation of the factors preventing immediate correction;

(d) Records of mortalities management and practices used by the AFO to meet the requirements of subsection (3)(d) of this section;

(e) Records documenting the current design of manure or litter storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity; and

(f) Records of the date, time, and estimated volume of any overflow.

(5) Recordkeeping requirement for the land application areas.

(a) Each AFO shall maintain on-site a copy of its site-specific nutrient management plan.

(b) Each AFO shall maintain on-site for a period of five (5) years from the date it was created a complete copy of the information required by the permit application Short Form B , the information required by subsection (2)(i) of this section, and the records specified in paragraphs (a) through (j) of this subsection.

(c) The AFO shall make these records available to the cabinet for review upon request.

1. Expected crop yields;

2. The date manure, litter, or process waste water is applied to each field;

3. Weather conditions at time of application and for twenty-four (24) hours prior to and following application;

4. Test methods used to sample and analyze manure, litter, process waste water, and soil;

5. Results from manure, litter, process waste water, and soil sampling;

6. Explanation of the basis for determining manure application rates, as provided in the

NRCS Conservation Standard Practice Code 590 for Kentucky;

7. Calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than manure, litter, or process wastewater;

8. Total amount of nitrogen and phosphorus applied to each field, including documentation of calculations for the total amount applied;

9. The method used to apply the manure, litter, or process wastewater; and

10. Each date of manure application equipment inspection.

(6) If an animal feeding operation does not discharge, does not intend to discharge, and obtains a Kentucky No-Discharge Operational Permit pursuant to this section, the cabinet shall not consider the animal feeding operation a CAFO.

(7) Permit conditions.

(a) A permit [~~Permits~~] may contain special conditions that in the best professional judgment of the cabinet are necessary to comply with KRS Chapter 224 and 401 KAR **Chapters [~~Chapter~~]** 4 through 11 [~~administrative regulations promulgated pursuant thereto~~].

(b) The conditions shall be in writing and shall be treated as part of the permit.

(c) The following conditions shall apply to all KNDOPs.

1. [~~(a)~~] There shall not be a [~~no~~] point source discharge of wastewater from the facility.

2. [~~(b)~~]The permit authorizes operation only of the WWTP described in the permit in the manner and under the conditions described in the permit application and supporting documents as approved by the cabinet in the permit.

3.a. [~~(c)~~] The permit shall not be construed as authorizing an [~~any~~] operation that [~~which~~] is otherwise in contravention of a [~~any~~] statute, administrative regulation, ordinance, or order of a [~~any~~] governmental unit.

b. The permit shall not be construed to authorize the creation or maintenance of a nuisance.

4.a. [~~(d)~~] The permit shall be subject to revocation or modification by the cabinet as established [~~set forth~~] in KRS Chapter 224.10-100 [~~224~~].

b. Commencement of a routine point source discharge shall result in a permit revocation.

5. [~~(e)~~] A [~~Any~~] permit shall be issued in accordance with [~~under~~] the provisions of KRS Chapter 224 and 401 KAR **Chapters [~~Chapter~~]** 4 through 11 [~~administrative regulations promulgated pursuant thereto~~]. Issuance of the permit shall not relieve the permittee from the responsibility of obtaining any other permits or licenses required by the cabinet and other state, federal, and local agencies.

6. [~~(f)~~] If applicable, the waste materials removed from the settling basin shall be disposed of according to the requirements of the Division of Waste Management in 401 KAR Chapters 30 through 49.

7. [~~(g)~~] Land application that [~~which~~] results in runoff to a stream shall be [~~is~~] prohibited.

Section 26. Kentucky Intersystem [~~Intermunicipal~~] Operational Permits (KISOPs) [~~(KIMOPs)~~]. A KISOP **shall be [~~is~~]** [~~These permits are~~] issued to publicly or privately owned sewer systems that [~~which~~] discharge to a WWTP or a sewer system that [~~which~~] is owned by another person.

(1) A KISOP [~~These permits~~] shall not apply to sewer systems with less than 5,000 linear feet of sewer line.

(2) A KISOP shall not apply to a sewer system that discharges to a POTW if the system is subject to a local permit pursuant to the pretreatment program established in 401 KAR 5:057.

(3) A KISOP shall be [~~The permit is~~] issued to the applicant and the permittee shall remain the responsible party [~~for compliance with all applicable statutes and administrative regulations~~]

until **a [~~an~~]** [~~a notarized~~ ~~applicable~~] change in ownership certification [~~, incorporated by reference in Section 29 of this administrative regulation,~~] is submitted and the transfer of ownership is acknowledged by the cabinet.

(4) Permits may contain special conditions that in the best professional judgment of the cabinet are necessary to comply with KRS Chapter 224 and 401 KAR **Chapters [~~Chapter~~]** 4 through 11 [~~administrative regulations promulgated pursuant thereto~~]. The conditions shall be in writing and shall be treated as a part of the permit.

Section 27. Operational Permits. **An operational permit [~~Operational permits~~]** required in Sections 25 and 26 of this administrative regulation shall be valid for five (5) years from the date of issuance**[~~,~~]** and shall be renewed to maintain continuous operation.

(1) The operational [~~cabinet's~~] permit shall [~~may~~] specify the type of monitoring or analysis required for a facility**,** and the frequency that the monitoring or analysis shall be performed and reported to the cabinet.

(2) The facility, including backup or auxiliary components, shall be operated and maintained to ensure compliance with permit requirements and this administrative regulation.

(3) The issuance of a permit by the cabinet shall not convey [~~any~~] property rights [~~of any kind~~] or any exclusive privilege.

Section 28. Transfer of Operating Permits.

(1) An operating permit shall be issued to the applicant, and the permittee shall remain the responsible party for compliance with the permit until:

(a) A change in ownership certification is submitted by the new owner and the transfer of ownership is acknowledged by the cabinet; or

(b) The current permittee has submitted a change in ownership certification and the transfer

has been acknowledged by the cabinet.

(2) A change in ownership certification submitted by the current permittee without the signature of the new owner shall include a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them.

[(3)A change in ownership certification shall serve as an application for a minor modification of the operating permit.]

Section 29. Alternative Requirements. (1) The cabinet may approve alternative requirements to the provisions of Sections 7 **through [to]** 23 of this administrative regulation based on the cabinet's best professional judgment that the alternative measure provides sufficient treatment**[,]** or transport.

(2) The applicant shall demonstrate that an alternative [any alternatives] requested by the applicant provides [provide] sufficient treatment or transport.

Section 30. [Section 29.] Material [Documents] Incorporated by Reference. (1) The following material is incorporated by reference:

(a) "Recommended Standards for Wastewater Facilities", 2004 ["1990 Edition"], Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers. This document is also known as the "Ten States' Standards";

(b) "Water Policy Memorandum No. 84-02, Five Mile Limit Policy, signed by T. Michael Taimi, August 28, 1984", Facilities Construction Branch;

(c) "Construction Permit Application for Wastewater Treatment Plant, DEP 7071-W (2/2009)" [(9/96)", Facilities Construction Branch];

(d) "Construction Permit Application for Sewer Line Extension, DEP 7071-S (9/96)",

Facilities Construction Branch;

(e) "Change in Ownership Certification for Sewer Line Extensions, DEP 7071-CO (9/96)", Facilities Construction Branch;

(f) "Change in Ownership Certification, DEP 7032-CO (2/2009) [~~(9/96)~~]";

(g) "No Discharge Certification, DEP 7032-NDC (2/2009) [~~(9/96)~~]";

(h) "Kentucky No Discharge Operational Permit Application, DEP 7033-ND (2/2009) [~~7032-ND (9/96)~~]";

(i) "Kentucky No Discharge Operational Permit Application for Agricultural Wastes Handling Systems, Short Form B, DEP 7033-B-ND (2/2009) [~~7032-B-ND (9/96)~~]";

(j) "Site Survey Request, Kentucky No Discharge Operational Permit for Agricultural Wastes Handling System, DEP 7032-Ag-Site (9/96)"; [~~and~~]

(k) "Kentucky Intersystem [~~Intermunicipal~~] Operational Permit Application, DEP 7103 (2/2009) [~~(9/96)~~]"; and [~~.~~]

(l) "NRCS Conservation Practice Standard Nutrient Management Code 590 for Kentucky, NRCS, KY (5/24/01).

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Water, 200 Fair Oaks Lane [~~14 Reilly Road~~], Frankfort, Kentucky, Monday through Friday, 8 a.m. to 4:30 p.m.

401 KAR 5:005 "Permits to construct, modify, or operate a facility." (Amended After Comments) approved for promulgation:

Date	Henry "Hank" List, Deputy Secretary, FOR Leonard K. Peters, Secretary Energy and Environment Cabinet

REGULATORY IMPACT ANALYSIS AND TIERING STATEMENT

Administrative Regulation #: 401 KAR 5:005
Contact Person: Peter T. Goodmann, Assistant Director

(1) Provide a brief summary of:

(a) What this administrative regulation does: This administrative regulation establishes procedures for the issuance of permits for the construction, modification, and operation of facilities authorized under KRS Chapter 224 and establishes conditions for construction of facilities under this chapter. This administrative regulation also establishes a schedule of fees to recover the costs of issuance for certain classes of permits.

(b) The necessity of this administrative regulation: This administrative regulation provides specific requirements for construction and modification of wastewater treatment facilities. This administrative regulation is necessary to implement the goals of KRS 224 to eliminate pollution in the Commonwealth. This administrative regulation is necessary to address environmental goals of KRS 224 that are not covered under federal law.

(c) How this administrative regulation conforms to the content of the authorizing statutes: This administrative regulation conforms to KRS 224.10-100, which authorizes the cabinet to issue, continue in effect, revoke, modify, suspend or deny permits to discharge into waters of the Commonwealth, and for the installation, alteration, expansion, or operation of any sewage system. This administrative regulation is consistent with the pollution prevention goals of KRS Chapter 224.

(d) How this administrative regulation currently assists or will assist in the effective administration of the statutes: This regulation provides specific requirements for several categories of construction permits, and for specific requirements for no-discharge operating permits. Additionally, the administrative regulation incorporates application forms relevant to the permitting process by reference.

(2) If this is an amendment to an existing administrative regulation, provide a brief summary of:

(a) How the amendment will change this existing administrative regulation: In Section 1(3)(a)1.a., the requirement to comply with Section 30(1)(h) and (i) is removed because this subparagraph relates to CAFOs. CAFOs discharge or intend to discharge; therefore, a CAFO cannot obtain the no-discharge permits referenced in Section 30(1)(h) and (i). The amendment of Section 2(1)(e) clarifies that KNDOP permits are for those facilities that do not discharge and do not intend to discharge. Section 2 (1) (g) clarifies that individual family residences file a notice of intent for coverage under a KPDES general permit. Section 2 (1) (h) reflects that intersystem operating permits are not limited to municipal systems. Section 3 (2) adds lat/long to application requirements. Section 3 (4) adds the distance criteria rule associated with "available" that was formerly in 401 KAR 5:002. Section 4 limits application of the Five Mile Policy to wellhead protection areas under the direct influence of surface water. Section 8 clarifies that design criteria is based on influent flow and includes peak flow and phosphorus concentration. Section 10 (15) clarifies who may determine if used equipment is properly reconditioned. The amendment of Section 13 applies the most stringent reliability requirements to only the most sensitive water uses and makes the regulation consistent with Ten State Standards' engineering practices. Section 21 establishes additional technical criteria for disposal by spray irrigation, including the prohibition of

disposal onto slopes greater than twenty-five percent. The amendment of Section 22 incorporates the setback distances of Health Department regulations. The amendment of Section 25 adds detail to the requirements for Kentucky No-Discharge Operating Permits. For animal feeding operations, the proposed amendment adds several specific requirements that were previously applied as best professional judgment requirements under the cabinet's authority to include practices necessary for the protection of public health and the environment. Section 28 allows the existing permit holder to apply for a transfer of the permit because of an ownership change. Section 29 clarifies that the cabinet's existing authority to consider alternative measurement for treatment extends to alternate measures of sewage transport. Amendments were made in response to comment to clarify intent.

(b) The necessity of the amendment to this administrative regulation: It is necessary to amend this regulation to add detailed requirements for animal feeding operations that seek a no-discharge permit. If the regulation is not amended as proposed, the state regulations will remain silent on specific requirements that are needed for the Division of Water to achieve the goals of KRS 224. Additionally, the amendment includes by reference the forms that have been modified to comply with the amended regulation.

(c) How the amendment conforms to the content of the authorizing statutes: KRS 224.10-100 authorizes the cabinet to issue, continue in effect, revoke, modify, suspend or deny under such conditions as the cabinet may prescribe, permits to discharge into any waters of the Commonwealth, and for the installation, alteration, expansion, or operation of any sewage system. The proposed amendment continues to provide for water pollution control as provided in KRS Chapter 224.

(d) How the amendment will assist in the effective administration of the statutes: The amendment clarifies the setback requirements for individual residences, and provides specific details on the regulation of animal feeding operations that do not intend to discharge. The details provided in this amendment will aid in carrying out the goals of KRS Chapter 224.

(3) List the type and number of individuals, businesses, organizations, or state and local governments affected by this administrative regulation:

This amendment affects individuals, businesses, and organizations that are engaged in the regulated disposal of treated wastewater under the KPDES and KNDOP permitting programs. This administrative regulation potentially affects over 10,000 existing permitted entities including individuals, businesses, and governmental organizations. Not all entities that have existing permits will be affected. Those affected will be entities that seek new or modified permits to construct wastewater facilities and entities that seek no-discharge operating permits. The amendment is expected to impact the following number of entities:

a. Individuals: 170 per year through construction permits for individual family residences.
b. Businesses: Approximately 25 businesses per year are impacted by the construction permit requirements for new or expanded package treatment plants. Approximately 250 animal feeding operations are affected each year by construction permit requirements or operating permit requirements. The construction permit requirements for sewer-line-extension projects affect an estimated 400 businesses each year. These estimates do not reflect the total number of applications because roughly 25% of businesses are expected to have multiple applications.
c. Organizations: 10 per year, primarily through construction permits issued to non-public organizations such as churches, summer camps, and private social or sporting clubs.

These entities apply for a relatively small number of sewer line extensions and package treatment plant permits.

d. State or Local Government: Approximately 200 per year, primarily through construction permits for sewer line extensions. The construction permit requirements for new or expanded treatment facilities affect approximately 20 of these. The number of applications is larger than the number of affected entities due to multiple applications from the same governmental entity.

(4) Provide an analysis of how the entities identified in question (3) will be impacted by either the implementation of this administrative regulation, if new, or by the change, if it is an amendment, including:

(a) List the actions that each of the regulated entities identified in question (3) will have to take to comply with this administrative regulation or amendment: The regulated entities will have to submit a revised version of an application form that they currently submit**.** This amendment clarifies that those animal feeding operations requiring a permit shall submit a nutrient management plan as part of the permit application process.

(b) In complying with this administrative regulation or amendment, how much will it cost each of the entities identified in question (3): None of the entities identified in question (3) are expected to incur an increased cost.

(c) As a result of compliance, what benefits will accrue to the entities identified in question (3): Individual family residence applicants will not be confused by potential inconsistencies between existing Health Department setbacks and the setback requirements of the Division of Water. Animal feeding operations will have an option for a no-discharge permit that is less costly than a discharge permit issued pursuant to the Clean Water Act. Animal feeding operations are expected to benefit from better protection of land and water as a result of this regulation.

(5) Provide an estimate of how much it will cost the administrative body to implement this administrative regulation:

(a) Initially: No additional cost

(b) On a continuing basis: No additional costs

(6) What is the source of the funding to be used for the implementation and enforcement of this administrative regulation? Existing permit fees, General Funds, and EPA Funds. There is no change in source of funding for this amendment.

(7) Provide an assessment of whether an increase in fees or funding will be necessary to implement this administrative regulation, if new, or by the change if it is an amendment: This amendment requires no additional fees or funding for support.

(8) State whether or not this administrative regulation established any fees or directly or indirectly increased any fees: This amendment does not affect fees directly or indirectly.

(9) TIERING: Is tiering applied? (Explain why or why not) Permit requirements and fees are tiered based upon the nature and size of the wastewater discharge.

FISCAL NOTE ON STATE OR LOCAL GOVERNMENT

Regulation #: 401 KAR 5:005 **Contact Person:** Peter T. Goodmann, Assistant Director

1. **Does this administrative regulation relate to any program, service, or requirements of a state or local government (including cities, counties, fire departments, or school districts)?**
   Yes __X__ **No** _____
   If yes, complete questions 2-4.

2. **What units, parts or divisions of state or local government (including cities, counties, fire departments, or school districts) will be impacted by this administrative regulation?** This administrative regulation affects wastewater treatment systems that discharge to waters of the Commonwealth or operate sewage systems. This administrative regulation affects all units of state or local government that have a KPDES discharge permit or a KNDOP permit for wastewater.

3. **Identify each state or federal statute or federal regulation that requires or authorizes the action taken by the administrative regulation.**
   KRS 224.10-100

4. **Estimate the effect of this administrative regulation on the expenditures and revenues of a state or local government agency (including cities, counties, fire departments, or school districts) for the first full year the administrative regulation is to be in effect.**
   (a) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for the first year? This amendment is not expected to generate additional state or local government revenue.
   (b) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for subsequent years? This amendment is not expected to generate additional state or local government revenue.
   (c) How much will it cost to administer this program for the first year? The amendment is not expected to create any additional cost.
   (d) How much will it cost to administer this program for subsequent years? The amendment is not expected to create any additional cost.

Note: If specific dollar estimates cannot be determined, provide a brief narrative to explain the fiscal impact of the administrative regulation.

Revenues (+/-):
Expenditures (+/-):
Other Explanation:

DETAILED SUMMARY OF MATERIAL
INCORPORATED BY REFERENCE
IN 401 KAR 5:005

The following materials are incorporated by reference in 401 KAR 5:005:

I. This administrative regulation incorporates by reference the document "Recommended Standards for Wastewater Facilities", 2004, Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers. This document is also known as the "Ten States' Standards". The amended edition incorporates more recent engineering criteria and standards for the construction of wastewater treatment plants and sewer systems.

This document consists of one hundred fifty-seven (157) pages.

II. This administrative regulation incorporates by reference the form Construction Permit Application for Wastewater Treatment Plant, DEP 7071-W (2/2009). This amended form removes a reorganized branch name, makes formatting changes, corrects the mailing address, removes the instruction sheet, and designates that the form applies to sewer lines if construction of the sewers is concurrent with construction of a wastewater treatment facility.

This document consists of three (3) pages.

III. This administrative regulation incorporates by reference the form Change in Ownership Certification, DEP 7032-CO (2/2009). This amended form removes the requirement for signature notarization, makes formatting changes, and corrects the mailing address.

This document consists of one (1) page.

IV. This administrative regulation incorporates by reference the form No Discharge Certification, DEP 7032-NDC (2/2009). This amended form allows the prior owner or the new owner to complete the form. The amendment provides clarification regarding the new name of the facility. Additionally, the amended form has formatting changes and a revised mailing address.

This document consists of two (2) pages.

V. This administrative regulation incorporates by reference the form Kentucky No Discharge Operational Permit Application, DEP 7033-ND (2/2009). This amended form replaces DEP 7032-ND (9/96). The amendment revises the form number, revises the mailing address, and makes formatting changes.

This document consists of two (2) pages.

VI. This administrative regulation incorporates by reference the form Kentucky No Discharge Operational Permit Application for Agricultural Wastes Handling Systems, Short Form B, DEP 7033-B-ND (2/2009). This amended form, revises the mailing address, makes

formatting changes, revises required information from animal feeding operations, removes instructions, and requires the submittal of a nutrient management plan for large animal feeding operations.

This document consists of four (4) pages

VII. This administrative regulation incorporates by reference the form Kentucky Intersystem Operational Permit Application, DEP 7103 (2/2009). This amended form replaces the form Kentucky Intermunicipal Operational Permit Application, DEP 7103 (9/96). The amended form extends coverage of the application beyond municipal systems to privately operated systems. The amendment revises the mailing address, clarifies latitude/longitude requirements, and makes formatting changes.

This document consists of two (2) pages

VIII. This administrative regulation incorporates by reference the form NRCS Conservation Practice Standard Nutrient Management Code 590 for Kentucky, NRCS, KY (5/24/01).This new form establishes best management and nutrient management practices for animal feeding operations.

This document consists of twenty-eight (28) pages.